

Amendments to the Claims

This listing of claims replaces all prior versions, and listings, of claims in the above-identified application:

1-45. (Canceled)

46. (Currently Amended) A method of identifying a protein function of a target molecule, the method comprising:

providing a plurality of mixtures of test compounds consisting of known inhibitors, cofactors, and substrates of known proteins, each mixture being in a sample reservoir and containing a plurality of test compounds;

introducing a target molecule into each of the sample reservoirs to provide a plurality of test samples;

providing a nuclear magnetic resonance spectrometer equipped with a flow-injection probe;

transferring each test sample from the sample reservoir into the flow-injection probe;

collecting a WaterLOGSY nuclear magnetic resonance spectrum on each sample in each reservoir;

comparing the spectra of each sample to the spectra taken under the same conditions in the absence of the target molecule to identify compounds that bind to the target molecule, wherein the concentration of target molecule and each compound in each sample is no greater than about ~~5 μ M and 125 μ M, respectively~~ 100 μ M; and

determining a function of the target molecule based upon the test compounds that bind to the target molecule.

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Amendment & Response

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For: METHODS FOR CREATING A COMPOUND LIBRARY

47. (Currently Amended) The method of claim 46 wherein the concentration of target molecule in each sample is no greater than about 10 μ M.
48. (Previously Presented) The method of claim 47 wherein the concentration of target molecule is no greater than about 1 μ M.
49. (Previously Presented) The method of claim 46 wherein the concentration of each test compound in each sample reservoir is no greater than about 100 μ M.
50. (Previously Presented) The method of claim 46 wherein each test compound has a solubility in deuterated water of at least about 1 mM at room temperature.
51. (Previously Presented) The method of claim 46 wherein collecting a WaterLOGSY nuclear magnetic resonance spectrum comprises collecting a 1D WaterLOGSY nuclear magnetic resonance spectrum.
52. (Previously Presented) The method of claim 46 wherein the mixture of test compounds comprises at least about 3 compounds, each having at least one distinguishable resonance in a 1D NMR spectrum of the mixture.
53. (Currently Amended) The method of claim 46 wherein the ratio of ~~target molecule to~~ each test compound to target molecule in each sample reservoir is about 100:1 to about 10:1.
54. (Canceled)
55. (Previously Presented) The method of claim 46 wherein the target molecule is a protein.
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